

Intelligent software could give students a real push

Feb 25 2008 By [Shahid Naqvi](#)

*An 'intelligent' research tool used by security services, news agencies and bluechip companies is being tested on pupils in Birmingham. Called Autology, it could radically transform the way children learn, virtually making text books a thing of the past. Education Correspondent **Shahid Naqvi** reports.*

Not so many decades ago, students doing research would have to rely on books. Then internet search engines like Google opened the window to a world of online information - not always reliable - at the touch of a keyboard.

Today, the next big revolution in information gathering is practically doing away with the need for traditional research completely, by delivering relevant material straight to students as they write.

Called "push technology", it is described as the closest thing to having an intelligent personal research assistant at your disposal 24/7.

It is already used by MI5, the FBI, BBC, Reuters, Merrill Lynch, the Deutsche Bundesbank and IBM - and now it is being tested in the field of education on six schools in Birmingham.

David Black, head of a company that is pioneering the education-specific software called Autology said: "It is pattern recognition technology which is able to push relevant information to a user. There is no need to go and search for it. It can be pushed to you conceptually, matched to what you are writing about.

"It is like a student sitting in a library and as they are writing their essay somebody keeps coming up to them saying 'you are writing about this, have you seen this?'

"They are not having to go and get it. It's as near as you are going to get to artificial intelligence."

Autology is an educational off-shoot of a software system called Autonomy developed in the late 80s by an academic at Cambridge University. It works by reducing text, sound and video to mathematical equations, meaning it becomes easier to match information conceptually.

"When you do a search on Google you get a keyword match, it is not sensible," said Mr Black. "Autology can match concepts to the syntactic relationship that exists between words.

"That means it can get at unstructured information that Google can't get at because it can only get at information that has been tagged, or underlined."

According to Mr Black, the vast majority of information on the internet is unstructured, meaning it is not tagged and won't appear in Google searches. Therefore, people are only able to see the "tip of the iceberg" while about two-thirds remains hidden.

Autology's more intelligent way of scanning information focuses on an education-specific "walled garden" in which curriculum-relevant information, including about 300 text books and 10,000 web links are planted.

When a pupil types in words in an ordinary text document, a tool bar flashes a dialogue box. If this is clicked on it will bring down brief summaries of information in text, video or audio form which can in turn be clicked on for more detail.

Autology harvests information within the walled garden, instantly throwing up relevant information because it is able to understand the sense of the topic rather than just matching up words.

Mr Black denies claims that it will mean the end of research skills.

"We are in an information age. You can't un-invent the wheel. It is not to say students will not have research techniques, but we are moving into an era of push technology where information will be pushed to the user. The new skills will not be how you get the information but what you do with it when you have got it, how you analyse and evaluate it. Getting it isn't the problem - it is using the higher skills which in a way is more demanding."

The cost of having the service in a school would be £12.50 per pupil. For a typical secondary of 1,000 pupils, that equates to £12,500 from the budget.

Mr Black - a former teacher with 20 years' experience - believes the benefit to schools is worth the cost which is offset by savings in the amount of text books they need to buy.

"We are not saying it is going to get rid of text books," he added. "A teacher will always want a text book in a classroom. But in the future the teacher is no longer the sage with the stage but the guide on the side.

"It is not about getting the information. What the teacher needs to do is develop the higher order skills of evaluation and analysis in pupils."

<http://www.birminghampost.net/news/west-midlands-education-news/2008/02/25/intelligent-software-could-give-students-a-real-push-65233-20521370/>